

Hao Xu's Notebook

07/11/16

Work finished:

1. Analyze the dynamic gene toggle switch (Runge-Kutta algorithm and ode function), arrange the report on Thursday.
2. Review the gene toggle switch, clear up the first part (static state model) and the fourth model (toggle switch function).

Problem unsolved:

1. Realize Runge-Kutta algorithm via MATLAB.

07/12/16

Work finished:

1. Read the literature about gene circuit model.
2. Scan the gene circuit model.
3. Understand Runge-Kutta algorithm.

Problem unsolved:

1. The rest of gene circuit model.

07/13/16

Work finished:

1. Realize Runge-Kutta algorithm and improved Euler algorithm via MATLAB.
2. The second\third\fourth part of gene circuit model.
3. Review some conceptions in MATLAB.

Problem unsolved:

1. Standardize the data in standard library.

07/14/16

Work finished:

1. Make report about the second\third part of gene toggle switch.
2. Modified Finite State Projection (FSP) algorithm.

Problem unsolved:

1. Complete the train of thought about how to construct the model we need.

07/15/16

Work finished:

1. Standardize the equation of production reaction.
2. Learn MATLAB.

Problem unsolved:

1. Understand 2015 wiki of SYSU and arrange work division.

07/16/16

Work finished:

1. Understand the 2015 wiki of SYSU.
2. Make a meeting with group leaders, clear up and arrange tasks.

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Problem unsolved:

1. Simplify formula and list the depending relationship.

07/18/16

Work finished:

1. Clear up SYSU wiki in 2014 and 2015.
2. The third part of Insulator Parts to Buffer Synthetic Circuits from Genetic Context.

Problem unsolved:

1. Find the original data in cello and test model.

07/19/16

Work finished:

1. Gene circuit model.
2. The third part of Insulator Parts to Buffer Synthetic Circuits from Genetic Context.

Problem unsolved:

1. Clear up the goal of theory work.
2. Find the method to test and verify.

07/20/16

Work finished:

1. Contact with Pro Wang, clear up the main task to be finished.
2. Amend the HP plan.

Problem unsolved:

1. Clear up the four model.

07/21/16

Work finished:

1. Amend the wiki plan and consult with wiki, DNA design group.
2. Amend the HP plan, two groups will go to prepare to make video.

Problem unsolved:

1. Realize gene circuit model via MATLAB.

07/23/16

Work finished:

1. Realize gene circuit model via MATLAB.
2. Learn the first and second chapters of MATLAB.

Problem unsolved:

1. Learn MATLAB.

07/25/16

Work finished:

1. MATLAB realization in gene circuit model.
2. Analyze infinity state.

Problem unsolved:

1. Analyze infinity state.

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07/27/16

Work finished:

1. Find the method of how to construct infinite array.
2. Endorse the plan of making human practice's video.

Problem unsolved:

1. Understand the method of constructing two-dimension infinite array.

07/28/16

Work finished:

1. The third part of FSP algorithm.
2. Endorse the plan of making human practice's video.
3. Amend the interview draft of game's video.

Problem unsolved:

1. Understand FSP algorithm more deeply, especially about the array.

07/29/16

Work finished:

1. Construct infinite array.
2. Find the limitation condition of FSP algorithm.

Problem unsolved:

1. Communicate with the instruction and know whether there are some conditions left.

08/01/16

Work finished:

1. According to FSP algorithm examples, put forward the state reaction array, simulate and simplify it via MATLAB.

Problem unsolved:

1. Simplify the state reaction array.
2. Amend the sort file of software projects over years.

08/02/16

Work finished:

1. Simplify the infinite array.
2. Amend the video plan of Southwest Alliance.
3. Endorse the sort file of ODE models.

Problem unsolved:

1. Simplify the infinite array.

08/03/16

Work finished:

1. Clear up modeling of FSP algorithm.
2. Amend the video plan of Southwest Alliance and the visiting plan of students in Grade 6 and 7.
3. Collect the video about feedback to game education.
4. Amend the sort file of ODE modeling and software projects over years.

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Problem unsolved:

1. Complete the first sort file of FSP modeling.
2. Amend the sort file of ODE modeling and software projects over years.
3. Amend the PPT of Southwest Alliance.

08/04/16

Work finished:

1. Complete the infinite array builder.
2. Amend the video plan of Southwest Alliance.
3. Endorse the sort file of ODE modeling.
4. Clear up collaborations.

Problem unsolved:

1. Go to Southwest Alliance to show us.